

MUMPS Q & A

Updated October 7, 2016



What are the CDC's routine recommendations for mumps vaccine?

Children should get 2 doses of MMR or Measles, Mumps, Rubella, and Varicella (MMRV) vaccine;

- **First Dose:** 12-15 months of age
- **Second Dose:** 4-6 years of age
- Children ages 7-18 that have not been vaccinated should receive
- **First Dose:** as soon as possible
- **Second Dose:** 4 weeks after the first dose

Adults who were born during or after 1957 who do not have evidence of immunity against mumps should get at least 1 dose of MMR vaccine.

What are the recommendations in the context of this outbreak?

In involved preschools, kids under 4 years of age who have had at least 28 days since their first MMR vaccine can get a second shot early. It will still count towards ADH school requirements.

Why are kids being excluded from school?

Mumps spreads when an infected person coughs or sneezes. Mumps can spread before symptoms (such as swollen glands) appear and for 5 days afterward. Therefore, students with exemptions are excluded from school for their protection and the protection of others.

What are the exclusion criteria for schools?

# Cases in School	ADH Recommendation
0	Students with vaccine exemptions are not affected
1	Exclude students with vaccine exemptions who have close contact with an individual who has tested positive for the mumps (for example: children in the same classroom)
2+	Exclude all under-vaccinated individuals due to higher transmission risk. Recommendations regarding additional booster vaccination will be made on a school by school basis.

Will students who opt to receive the vaccination after exposure be monitored?

Yes, students who are vaccinated and return to school will be monitored for symptoms of mumps for 26 days. If the student develops symptoms of mumps, he/she will be excluded from school and treated as a new case.

What happens to children who have a medical or non-medical exemption and do not receive the MMR vaccine?

Students with medical or non-medical exemptions who opt out of the recommended MMR vaccination will be excluded from school for 26 days or for the duration of the outbreak within that school, whichever is longer.

Why are children who get vaccinated allowed to return immediately when it takes 2 weeks to gain full immunity from the vaccine?

Immunity builds gradually from day 1 after vaccination, and most people who get vaccinated are considered fully immune within 2 weeks. Therefore, a vaccinated individual exposed to mumps has a lower likelihood of becoming infected and spreading mumps to others. This strategy is recommended by CDC and has been highly effective in previous mumps outbreaks.

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Of the cases, how many have had the CDC recommended doses of MMR vaccine?

Most of the children under the age of 18 have received the recommended doses of MMR (89.7%). However, fewer adults are up to date on their vaccine (35.1%).

What is parotitis?

Parotitis is swelling of the salivary glands located in front of each ear. People with parotitis look like they have swollen cheeks.

If I have parotitis, when can I return to school or work?

You may return to work and or school 5 days after the development of parotitis.

If I was exposed to a person who has a confirmed case of mumps, when can I return to school or work?

You may return immediately if you receive the MMR vaccine. You will be monitored closely to see if you develop symptoms of mumps. If you do develop symptoms, you will need to leave school or work again until 5 days after symptoms develop.

What is herd immunity?

Herd immunity (or “community immunity”) is when a high enough percentage of a community is immunized against a contagious disease to reduce the risk of an outbreak.

What is the herd immunity threshold needed for mumps?

The herd immunity threshold for mumps is about 86%.

What is the efficacy rate of the mumps vaccine (MMR)?

One dose of MMR vaccine is considered about 78% effective. Two doses are about 88% effective. Vaccine effectiveness is the measure of how well a vaccine protects a population, not an individual. Effectiveness is mathematically defined as [the attack rate in the unvaccinated minus the attack rate in the vaccinated] divided by the attack rate in the unvaccinated. The rate of mumps infection within a vaccinated population would be more than 9 times lower than in an unvaccinated population.

Is there a variation in the mumps virus that makes the vaccine less effective than expected?

The CDC is reporting that there is no significant variation in the genotype of mumps virus found in recent outbreaks or in the current Arkansas outbreak. The vaccine should provide good protection against this genotype.

What are the genotypes associated with mumps?

Mumps has 12 genotypes assigned letters A to N (excluding E and M). We have genotyped 10 of our cases, and all are genotype G, which is the most common mumps genotype in the western hemisphere. The specific strain of mumps causing the current outbreak in Arkansas is designated by the World Health Organization (WHO) as MUVS/Arkansas.USA/35.16/7 and is very closely related to the strains causing outbreaks of mumps in Iowa, New York, California, Oregon, and Massachusetts.